CLAIMS

1. A method comprising:

determining a length of a message received from a sending network; and

initiating relay of said message to a receiving network when a received portion of said message exceeds a relay threshold.

2. The method of claim **1** further comprising determining said relay threshold on the basis of said length.

3. The method of claim **1** wherein determining a length of said message comprises:

determining a length of said message on the basis of information contained in a header of said message.

4. The method of claim **1** wherein determining a length of said message comprises:

determining a length of said message on the basis of information obtained as part of a transmission protocol.

5. The method of claim **1** further comprising selecting said receiving network to be a network served by a bus.

6. The method of claim 1 further comprising selecting said sending network to be a packet-switched network.

7. The method of claim 1 further comprising selecting said sending network to be a network served by a bus.

8. The method of claim 1 further comprising selecting said receiving network to be a packet-switched network.

9. The method of claim 1 further comprising determining said relay threshold based on

a data transmission rate associated with said sending network, and

a data receiving rate associated with said receiving network.

10. The method of claim 9 wherein determining a data transmission rate associated with said sending network comprises:

determining a likelihood with which receipt of said message from said sending network will be interrupted; and

determining an effective data transmission rate on the basis of said likelihood.

11. The method of claim 10 wherein determining said likelihood comprises analyzing statistics on usage of said sending network and/or said receiving network.

12. The method of claim 9 wherein determining said relay threshold further comprises

evaluating a quantity derived from said data transmission rate and said data receiving rate, and

weighting said quantity by said length of said message.

13. The method of claim 1 wherein said receiving network includes a bus having a bus width and determining said relay threshold comprises constraining said relay threshold to be a multiple of said bus width.

14. The method of claim 1 wherein determining said relay threshold comprises obtaining said relay threshold from a look-up table.

15. A controller for relaying a message from a sending network to a receiving network, said controller comprising:

a first memory element in communication with said sending network and said receiving network; and

a processor for monitoring content of said first memory element, said processor initiating relay of said message to said receiving network when a received portion of said message in said first memory element exceeds a relay threshold.

16. The controller of claim **15** further comprising a relay-threshold determining process for determining a relay-threshold on the basis of a length of said message.

17. The controller of claim **15** further comprising a message parser, said message parser being adapted for extracting, from said message, information indicative of said length of said message.

18. The controller of claim **15** wherein said first memory element is in communication with a receiving network served by a bus and said first memory element is in communication with a packet-switched sending network.

19. The controller of claim **15** wherein said first memory element is in communication with a sending network served by a bus and said first memory element is in communication with a packet-switched receiving network.

20. The controller of claim **15** further comprising a second memory element for storage of a data transmission rate associated with said sending network, and a data

receiving rate associated with said receiving network, said second memory element being in communication with said relay threshold determining process

21. The controller of claim **20** wherein said relay-threshold determining process comprises:

a network-speed-adjustment process in communication with said second memory element for evaluating a quantity representative of an extent to which said data receiving rate differs from said data transmission rate; and

a weighting process in communication with said network-speed-adjustment process for weighting said quantity representative of said extent to which said data receiving rate differs from said data transmission rate by said length of said message.

22. The controller of claim **16** wherein said relay-threshold determining process comprises a look-up table for providing a relay threshold on the basis of a message length.

23. A system comprising:

a controller having a first port and a second port, said controller being adapted for

determining a relay threshold on the basis of a length of a message received at said first port and relaying said message through said second port when a buffered portion of said message has a length exceeding said relay threshold.

a bus in communication with one of said first port and said second port; and

a host memory element in communication with said bus.

24. A machine-readable medium having encoded thereon software for relaying a message from a sending network to a receiving network, said software comprising instructions for:

determining a length of said message; and

initiating relay of said message when a received portion of said message exceeds said relay threshold.

25. The machine-readable medium of claim **24** wherein said software further comprises instructions for determining a relay threshold of said message on the basis of said length.

26. The machine-readable medium of claim **24** wherein said instructions for determining a length of said message

comprise instructions for determining a length of said message on the basis of information contained in a header of said message.

27. The machine-readable medium of claim **24** wherein said instructions for determining a length of said message comprise instructions for determining a length of said message on the basis of information provided by a protocol associated with transmission of said message.

28. The machine-readable medium of claim **24** wherein said instructions for initiating relay of said message comprise instructions for passing said message to a network served by a bus.

29. The machine-readable medium of claim **24** wherein said instructions for initiating relay of said message comprise instructions for passing said message to a packet-switched network.

30. The machine-readable medium of claim **24** wherein said instructions for determining said relay threshold comprise instructions for evaluating a quantity derived from

a data transmission rate associated with said sending network, and

a data receiving rate associated with said receiving network.

31. The machine-readable medium of claim 30 wherein said instructions for determining a data transmission rate associated with said sending network comprise instructions for:

determining a likelihood with which receipt of said message from said sending network will be interrupted; and

determining an effective data transmission rate on the basis of said likelihood.

32. The machine-readable medium of claim 31 wherein said instructions for determining said likelihood comprise instructions for analyzing statistics on usage of said sending network and/or said receiving network.

33. The machine-readable medium of claim 30 wherein said instructions for determining said relay threshold further comprise instructions for weighting, by said length of said message, said quantity derived from said first transmission rate and said second transmission rate.

34. The machine-readable medium of claim 24 wherein said instructions for determining said relay threshold

comprise instructions for constraining said relay threshold to be a multiple of a bus width associated with a bus serving said receiving network.

35. The machine-readable medium of claim **24** wherein said instructions for determining said relay threshold comprise instructions for obtaining said relay threshold from a look-up table.